TRUE LOVE. HIGH ADVENTURE.
AND ONE ARGUMENT DUAL-BAND SSIDS

KEITH PARSONS

IS WRONG

(about almost everything)

dB

RATED dB FOR STRONG OPINIONS,
MILD RF VIOLENCE AND SPECTRUM ANALYSIS



A PRINCESS BRIDE STORY

TRUE LOVE. HIGH ADVENTURE.
AND ONE ARGUMENT DUAL-BAND SSIDS

~~DAVID COLEMAN~~

IS WRONG

(about almost everything)

dB

RATED dB FOR STRONG OPINIONS,
MILD RF VIOLENCE AND SPECTRUM ANALYSIS



A PRINCESS BRIDE STORY

TRUE LOVE. HIGH ADVENTURE.
AND ONE ARGUMENT DUAL-BAND SSIDS

~~PETER MACKENZIE~~

IS WRONG

(about CCC)

dB

RATED dB FOR STRONG OPINIONS,
MILD RF VIOLENCE AND SPECTRUM ANALYSIS



A PRINCESS BRIDE STORY

TRUE LOVE. HIGH ADVENTURE.
AND ONE ARGUMENT DUAL-BAND SSIDS

WES PURVIS

~~IS WRONG~~

(about almost everything)

dB

RATED dB FOR STRONG OPINIONS,
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A PRINCESS BRIDE STORY

I'VE KNOWN KEITH FOR YEARS.
THIS IS NOT A HATCHET JOB.

"A pretty nice guy, great mentor and friend."

– Jake Snyder, 2015

BLACK MOUNTAIN
DYNAMICS

JAKE SNYDER

Principal Architect, Black Mountain Dynamics

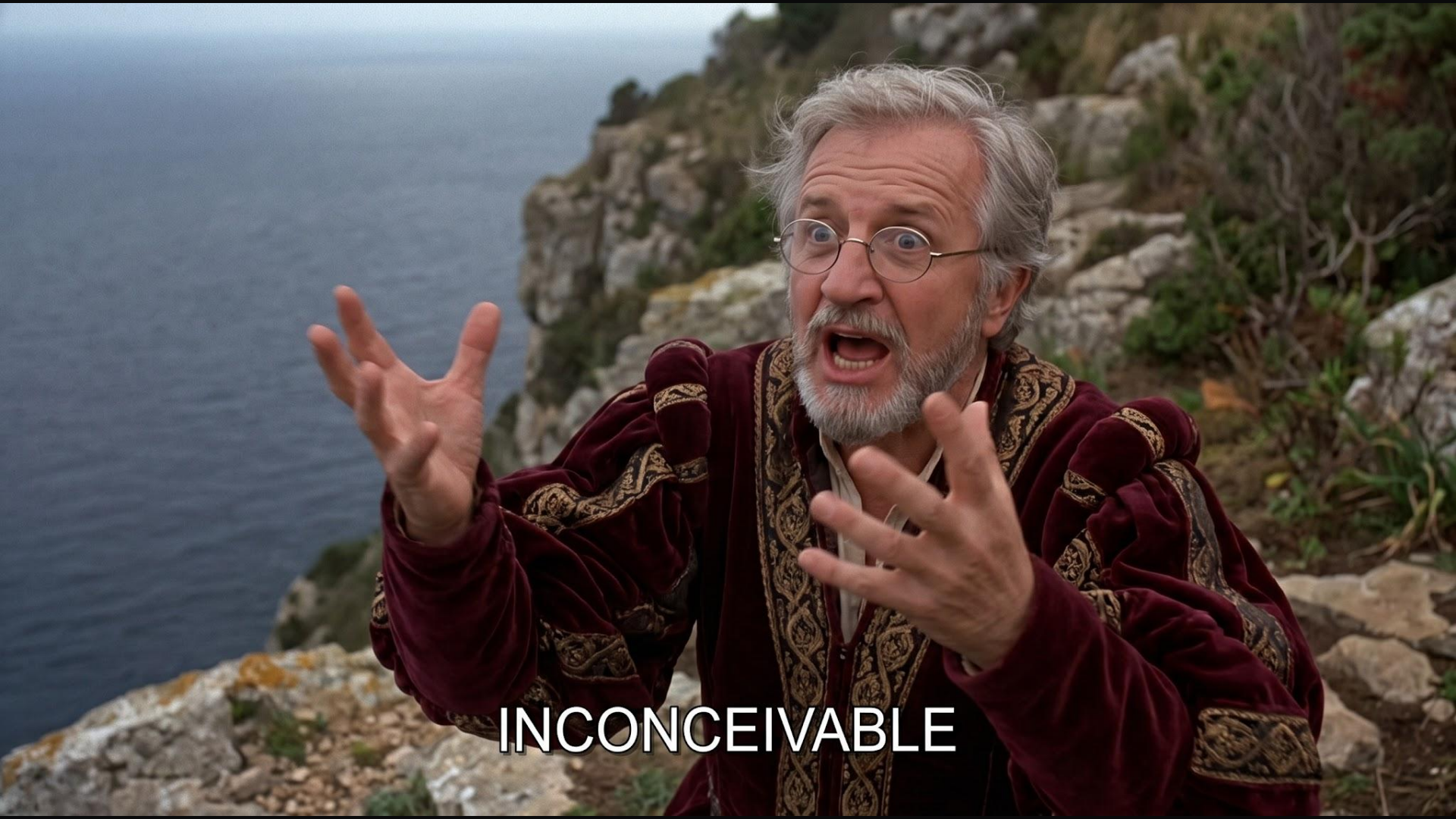
Also wrong about plenty. We'll get to that.




HELLO. MY NAME IS JAKE. PREPARE TO DEBATE.

KEITH AND I DON’T AGREE.
ON MUCH.
HE HAS TO BE WRONG, RIGHT?

BLACK MOUNTAIN
DYNAMICS


INCONCEIVABLE

THE SHORT VERSION

THERE IS NO CORRECT NUMBER.

THERE'S MEETS REQUIREMENTS.

BLACK MOUNTAIN
DYNAMICS

ACT II · THE FIRST CRACK

WE HAD DIFFERENT OBJECTIVES

“You don’t have to teach them the wrong ways, why they are bad... You just have to teach them how to do the right way.”

Keith Parsons, early WLPC

SURVEYORS

Teach the right way only.
Needs one repeatable procedure.
Result focused.

ENGINEERS

Understand how the wrong way fails.
Needs understanding for new cases.
Problem focused.

DIFFERENT JOBS, DIFFERENT REQUIREMENTS.

BLACK MOUNTAIN
DYNAMICS

KEITH'S CHECKLISTS

WI-FI CHECKLIST DESIGN REQUIREMENTS

SETTING	KEITH'S DEFAULT	BUILT FOR
Primary RSSI	-67 (2.4 GHz) / -65 dBm (5, 6 GHz)	Voice, dense laptops
Tx power	Static: 7 / 13 / 16 dBm	Predictability
Channels	1, 6, 11 at 20 MHz; no auto channel	Clean 2.4 GHz reuse
802.11b rates	Off: 1, 2, 5.5 and 11 Mbps	Improve Airtime
SSIDs	4 or fewer, plus a 2.4 GHz-only SSID	Lower overhead
Steering	No band steering, load balancing, MU-MIMO	Deterministic behavior

HIS OWN FINE PRINT

"Targeted at 80%–90% of use cases."

Source: Keith Parsons, "Wi-Fi Checklists" V.5, Wi-Fi Design Day, London, March 2024

BLACK MOUNTAIN DYNAMICS

MY PROBLEM WITH CHECKLISTS

CHECKLISTS: FOR CONSISTENCY, NOT FOR THINKING

WHAT THEY'RE FOR

- Nothing gets forgotten
- Consistency
- Easy to hand off

WHAT THEY GET USED FOR

- Skipping the why
- Rules without requirements attached
- No one knows when to deviate

YOU HAVE TO UNDERSTAND THE RULES,
TO KNOW WHEN TO BREAK THEM.

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DYNAMICS

DIFFERENT ROADS

OPPOSITE APPROACH. SAME DESTINATION.

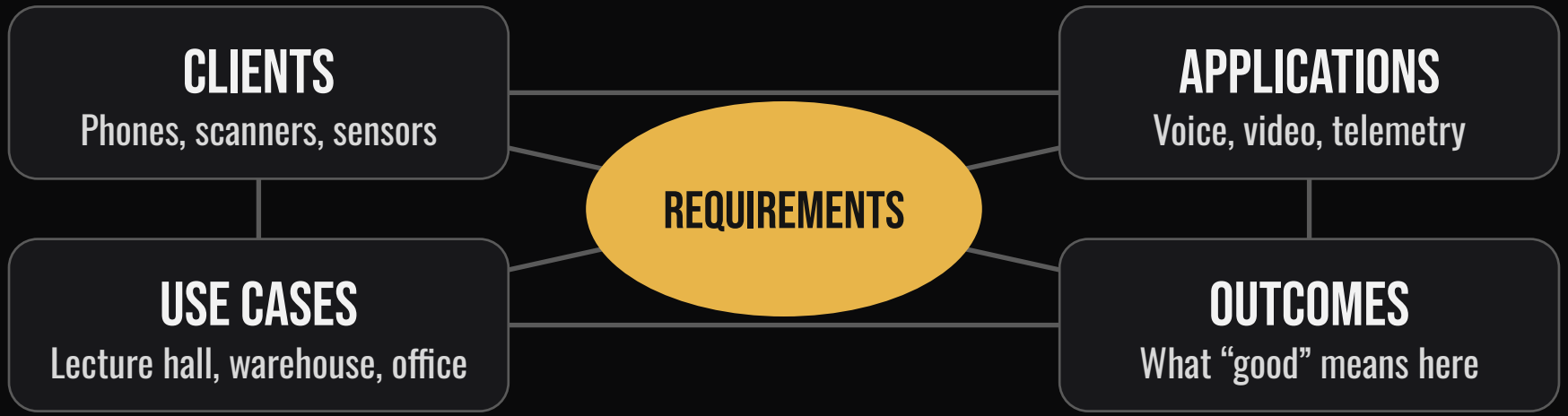


THE REQUIREMENTS PICK THE ROAD.

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DYNAMICS

ACT III · THE CORE IDEA

EVERY WI-FI NETWORK IS A SYSTEM OF INTERLOCKING VARIABLES

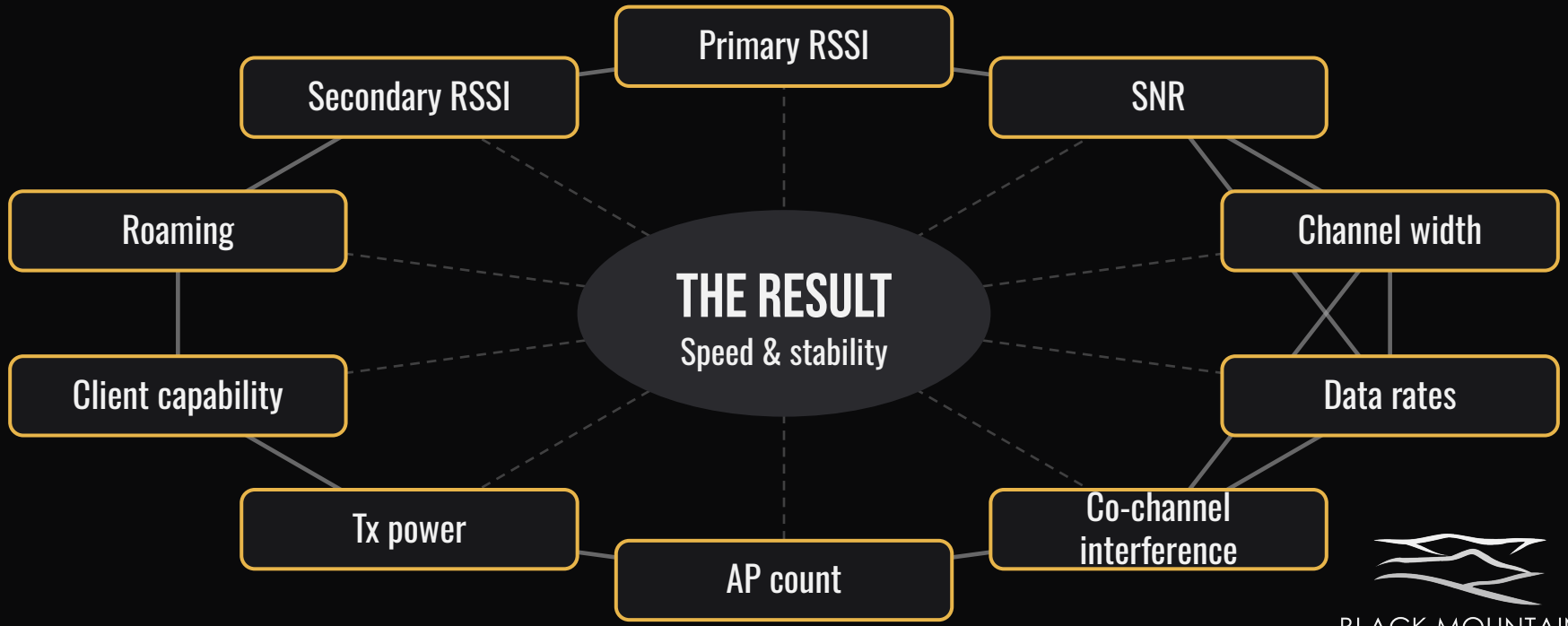


No two networks will line up the same way

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DYNAMICS

THE CORE IDEA, ZOOMED IN

EVERY DECISION MOVES EVERY OTHER ONE



BLACK MOUNTAIN DYNAMICS

SMALL CHANGES, BIG SWINGS

NUDGE ONE REQUIREMENT. WATCH THE RESULT MOVE.

Primary RSSI target -67 → -62 dBm	More APs and smaller cells, but more CCI
Minimum data rate 6 → 12 Mbps	Less overhead, but slow and legacy clients get left behind
Channel width 40 → 20 MHz	Keep CCI under control, but at a cost of peak throughput.
Transmit power turned down	Suffer from lower MCS rates

TINY DIAL. DIFFERENT NETWORK.

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DYNAMICS

WHERE PLAYBOOKS COME FROM

EVERY PLAYBOOK IS BUILT FROM WHAT WORKED



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DYNAMICS

THE ONES YOU DON'T SEE

NOT EVERY REQUIREMENT IS A WI-FI REQUIREMENT

THE WI-FI REQUIREMENTS

- Coverage and capacity
- Clients and applications
- Roaming and uptime

THE HIDDEN REQUIREMENTS

- Cost
- Profitability
- Process
- Your team's technical ability
- Risk tolerance

NOBODY WRITES THEM DOWN.
AND YET ARE STILL IMPORTANT.

BLACK MOUNTAIN
DYNAMICS



WHAT CAN WE LEARN FROM THE BATTLE OF WITS?

PERFECT LOGIC.
HIDDEN REQUIREMENT.

Vizzini reasoned through every cup. Nobody told him about the iocane immunity. That was the hidden requirement.

EXPERTS SHARE SUMMARIES

WHAT WE PUBLISH

A conclusion and a rule of thumb. Trust me.

METHOD

How it was tested

→

RESULTS

The raw data

→

REPRODUCTION

Others run it again

I'M AS GUILTY OF THIS AS ANYONE.

BLACK MOUNTAIN
DYNAMICS

MIRACLE MAX ON EXPERT ADVICE

MOSTLY RIGHT
IS NOT ALL RIGHT.

A summary is the mostly-right version. Question the requirements, methods and the WHY.

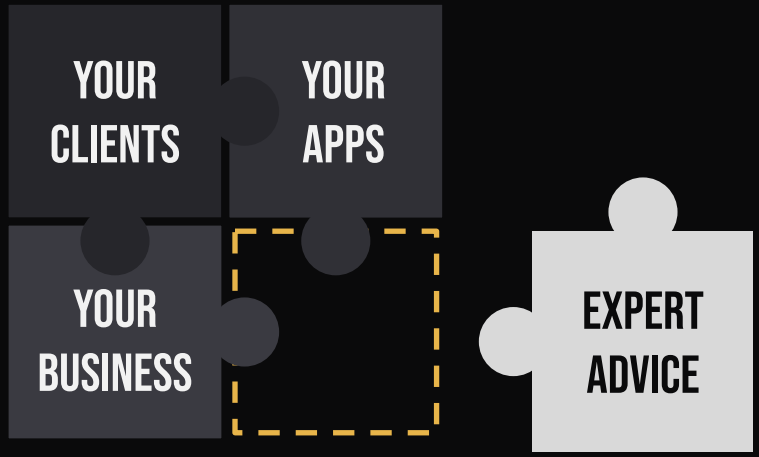
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BEFORE YOU TAKE THE ADVICE

DOES IT FIT YOUR PICTURE?

Expert advice is one piece, cut for someone else's puzzle. Before you use it, ask:

- ➔ Which requirements was it cut for?
- ➔ What else in my network does it touch?
- ➔ What breaks if I force it in?



IF YOU HAVE TO FORCE IT, IT'S NOT YOUR PIECE.

BLACK MOUNTAIN DYNAMICS


R.O.U.S: REQUIREMENTS OF UNUSUAL SIZE

AI IS THE NEWEST EXPERT

LIKE EXPERTS, AI HANDS YOU A SUMMARY

	EXPERTS	AI
WHAT YOU GET	A rule of thumb	A confident answer
WHAT'S HIDDEN	The requirements behind it	The requirements it assumed
HOW IT FAILS	Right for them, wrong for you	Looks right, but maybe not.

SAME TRAP. JUST FASTER.

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DYNAMICS

“THIS CHANGES EVERYTHING.”

“OH, YOU’RE RIGHT. THAT DOESN’T WORK.”

“You’re absolutely right!” · “Great catch!” · “I apologize for the confusion.”

EVERY BACKPEDAL IS A REQUIREMENT IT NEVER ASKED ABOUT.

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DYNAMICS

THE SAME RULE FOR AI

VALIDATE AI, VALIDATE AN EXPERT

REQUIREMENTS

Yours, or assumed?

→

METHOD

In what scenario does it break?

→

RESULTS

Do these requirements align with mine?

WHAT AI HANDS YOU

A conclusion and a rule of ~~thumb~~ dumb.

IT LEARNED THAT HABIT FROM US.

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DYNAMICS

THE CLASSIC BLUNDER

DON'T TRUST THE SUMMARY. VALIDATE THE RESULTS.

AI hands you a summary of summaries. Ask what requirements it assumed and how it got there, then check the result yourself.

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DYNAMICS


PREPARE TO VALIDATE.

TAKEAWAY

BORROW THE REQUIREMENTS, NOT JUST THE RULE

1

WHAT REQUIREMENT DOES IT SERVE?

Every rule, and every AI answer, was built for someone's outcome.

2

IS THAT REQUIREMENT MINE?

If not, the rule may be right for them and wrong for you.

3

WHAT ELSE IS IT BUILT ON?

Vendor, method, approach. Change one and test the rest.

THERE IS NO CORRECT NUMBER.
THERE'S MEETS REQUIREMENTS.

BLACK MOUNTAIN
DYNAMICS

“I WAS NEVER MORE THAN 50% RIGHT. – KEITH PARSONS”

WE’RE BOTH RIGHT FOR OUR OWN REQUIREMENTS,
AND WRONG FOR EACH OTHER’S.

BLACK MOUNTAIN
DYNAMICS

FINALE · NOT JUST WI-FI

WE DON'T ONLY DISAGREE ABOUT WI-FI

	KEITH	JAKE
THE BOSS	Works for himself	Works for an employer
WORK AND LIFE	Work/life balance is just life	Work and life are separate
PTO	Paid not to work	Pay normalization

Keith's heatmap rule: green does not mean good. Same rule at dinner.

BUT... WE CAN STILL BE FRIENDS.

BLACK MOUNTAIN
DYNAMICS

IN A WORLD WHERE -67 dBm IS LAW...
ONE ENGINEER DARED TO QUESTION IT.

JAKE SNYDER

IS WRONG

(about almost everything)

dB

RATED dB FOR STRONG OPINIONS,
MILD RF VIOLENCE AND SPECTRUM ANALYSIS



WLPC PRAGUE 2027 PRESENTS · A JAKE SNYDER PRODUCTION · JAKE SNYDER AS HIMSELF
WITH 6 GHz, CO-CHANNEL CONTENTION AND ONE VERY CONFIDENT SPREADSHEET

THE RESEARCH BEHIND THIS TALK

RESEARCH INTO THIS

ARGUED IN PUBLIC

KEITH VS KEITH

Go wide → why go wide?
25 per radio → no ratios
No hallway APs → some
Power vs CCI: no → yes

WHERE WE AGREE

Antennas over power
Don't force clients
Least capable device first
Always validate

WHERE IT CAME FROM

Design Day and WLPC talks · Keith's checklists and decks · X and LinkedIn, 2013–2026

WE AGREE MORE THAN THE TITLE SUGGESTS.

BLACK MOUNTAIN
DYNAMICS


HAVE FUN STORMING THE CASTLE